

Amendments to the Claims:

Claim 1 (currently amended): An isolated nucleic acid molecule comprising a sequence encoding ~~an SSE~~ a polypeptide having at least ~~30%~~ 70% identity with the amino acid sequence shown in Fig. 2B (SEQ ID NO: 2).

Claim 2 (canceled).

Claim 3 (currently amended): The nucleic acid molecule of claim 1, wherein said sequence encodes ~~an SSE~~ a polypeptide that, when expressed in a cell of a plant, modifies the production of food storage reserves.

Claim 4 (currently amended): The nucleic acid molecule of claim 1, wherein said sequence encodes ~~an SSE~~ a polypeptide that, when expressed in a cell of a plant, facilitates the intracellular transport of a storage protein.

Claim 5 (currently amended): The nucleic acid molecule of claim 1, wherein said sequence encodes ~~an SSE~~ a polypeptide that, when expressed in a cell of a plant, facilitates the formation of protein bodies.

Claim 6 (currently amended): The nucleic acid molecule of claim 1, wherein said sequence encodes ~~an SSE~~ a polypeptide that, when expressed in a cell of a plant, facilitates the formation of oil bodies.

Claim 7 (original): The nucleic acid molecule of claim 1, wherein said nucleic acid molecule is cDNA.

Claim 8 (currently amended): An isolated nucleic acid molecule comprising a sequence encoding ~~an SSE~~ a polypeptide that governs organelle biogenesis in a plant cell,

wherein said isolated nucleic acid molecule hybridizes under low stringency conditions to the nucleic acid molecule comprising the cDNA of Fig. 2A (SEQ ID NO:1), wherein said low stringency conditions comprise:

- (i) hybridization at about 42°C, 40% formamide, 0.1 mg/ml sheared salmon sperm DNA, 0.5% SDS, 5X SSPE, and 1X Denhardt's reagent;
- (ii) two washes at room temperature, 2X SSC, and 0.1% SDS; and
- (iii) two washes at room temperature, 0.5X SSC, and 0.1% SDS.

Claim 9 (canceled).

Claim 10 (original): The isolated nucleic acid molecule of claim 1 or 8, wherein said nucleic acid molecule is operably linked to a promoter functional in a plant cell.

Claim 11 (original): An expression vector comprising the nucleic acid molecule of claim 1 or 8, said vector being capable of directing expression of the polypeptide encoded by said nucleic acid molecule.

Claim 12 (previously amended): A cell transformed with the isolated nucleic acid molecule of claim 1 or 8.

Claim 13 (original): The cell of claim 12, wherein said cell is a plant cell.

Claim 14 (withdrawn): The cell of claim 12, wherein said cell is a bacterial cell.

Claim 15 (currently amended): The cell of claim 12, wherein said bacterial cell is *Agrobacterium*.

Claim 16 (previously amended): A plant or plant component transformed with a nucleic acid molecule of claim 1 or 8, wherein said nucleic acid molecule is expressed in said plant or said plant component.

Claim 17 (original): The plant or plant component of claim 16, wherein said transgenic plant or transgenic plant component is an angiosperm.

Claim 18 (original): The plant or plant component of claim 16, wherein said transgenic plant or transgenic plant component is a dicot.

Claim 19 (original): The plant or plant component of claim 16, wherein said transgenic plant or transgenic plant component is a cruciferous plant.

Claim 20 (original): The plant or plant component of claim 16, wherein said transgenic plant or transgenic plant component is a monocot.

Claim 21 (currently amended): A seed ~~from a transgenic plant or transgenic plant component of claim 16~~ comprising the isolated nucleic acid of claim 1 or 8.

Claim 22 (original): A cell from a transgenic plant or transgenic plant component of claim 16.

Claim 23 (currently amended): An expression vector comprising an isolated DNA molecule encoding an antisense RNA, wherein said antisense RNA inhibits expression of

(a) a nucleic acid molecule encoding a polypeptide having at least 70% identity to the amino acid sequence shown in Fig. 2B (SEQ ID NO:2) or

(b) a nucleic acid molecule comprising a sequence encoding a polypeptide that governs organelle biogenesis in a plant cell, wherein said nucleic acid molecule

hybridizes under low stringency conditions to the nucleic acid molecule comprising the cDNA of Fig. 2A (SEQ ID NO:1), wherein said low stringency conditions comprise:

- (i) hybridization at about 42°C, 40% formamide, 0.1 mg/ml sheared salmon sperm DNA, 0.5% SDS, 5X SSPE, and 1X Denhardt's reagent;
- (ii) two washes at room temperature, 2X SSC, and 0.1% SDS; and
- (iii) two washes at room temperature, 0.5X SSC, and 0.1% SDS for producing antisense SSE RNA.

Claim 24 (original): A transgenic plant or transgenic plant component comprising the vector of claim 23.

Claim 25 (original): A seed from a transgenic plant or transgenic plant component of claim 24.

Claim 26 (original): A cell from a transgenic plant or transgenic plant component of claim 24.

Claim 27 (withdrawn): A substantially pure SSE polypeptide comprising an amino acid sequence having at least 30% identity to the amino acid sequence of Fig. 2B (SEQ ID NO:2).

Claim 28 (withdrawn): The polypeptide of claim 27, wherein said polypeptide modifies the production of food storage reserves.

Claim 29 (withdrawn): The polypeptide of claim 27, wherein said polypeptide facilitates the intracellular transport of a storage protein.

Claim 30 (withdrawn): The polypeptide of claim 27, wherein said polypeptide facilitates the formation of protein bodies.

Claim 31 (withdrawn): The polypeptide of claim 27, wherein said polypeptide facilitates the formation of oil bodies.

Claim 32 (withdrawn): A method of producing an SSE polypeptide, said method comprising the steps of:

- (a) providing a cell transformed with a nucleic acid molecule of claim 1 or 8 positioned for expression in the cell;
- (b) culturing the transformed cell under conditions for expressing the nucleic acid molecule; and
- (c) recovering the SSE polypeptide.

Claim 33 (withdrawn): A recombinant SSE polypeptide produced according to the method of claim 32.

Claim 34 (withdrawn): A substantially pure antibody that specifically recognizes and binds to an SSE polypeptide or a portion thereof.

Claim 35 (withdrawn): The antibody of claim 34, wherein said antibody recognizes and binds to a recombinant SSE polypeptide or a portion thereof.

Claim 36 (withdrawn): A method of isolating an SSE gene or fragment thereof, said method comprising the steps of:

- (a) contacting the nucleic acid molecule of Fig. 2A (SEQ ID NO:1) or a portion thereof with a nucleic acid preparation from a plant cell under hybridization conditions providing detection of nucleic acid sequences having at least 30% or greater sequence identity to the nucleic acid sequence of Fig. 2A (SEQ ID NO:1); and
- (b) isolating said hybridizing nucleic acid sequences.

Claim 37 (withdrawn): A method of isolating an SSE gene or fragment thereof, said method comprising the steps of:

- (a) providing a sample of plant cell DNA;
- (b) providing a pair of oligonucleotides having sequence identity to a region of the nucleic acid of Fig. 2A (SEQ ID NO:1);
- (c) contacting the pair of oligonucleotides with said plant cell DNA under conditions suitable for polymerase chain reaction-mediated DNA amplification; and
- (d) isolating the amplified SSE gene or fragment thereof.

Claim 38 (withdrawn): The method of claim 37, wherein said amplification step is carried out using a sample of cDNA prepared from a plant cell.

Claim 39 (withdrawn): The method of claim 37, wherein said pair of oligonucleotides are based on a sequence encoding an SSE polypeptide, wherein the SSE polypeptide is at least 30% identical to the amino acid sequence of Fig. 2B (SEQ ID NO:2).